REMARKS

By the present communication new claims 51-58 are added. Claims 1-28 were previously canceled without prejudice to pursuing the subject matter of these claims in one or more applications claiming priority to the above-captioned application. Following entry of the amendments claims 29-58 will be under examination.

Claims 29 and 41 have been amended support for which can be found in the specification, for example, at page 11, lines 4-6. Support for new claims 51 and 55 can be found in the specification, for example, at page 6, lines 25-27; page 13, lines 4-7 and page 34, lines 21-23. Support for new claims 52, 53, 56 and 57 can be found in the specification, for example, at page 11, lines 4-11. Support for new claims 54 and 58 can be found in the specification, for example, at page 6, lines 32-34. Accordingly, the amendments do not raise any issues of new matter. Therefore, entry of the amendments is respectfully requested.

Information Disclosure Statement

The Office Action states that not all of the information referred to in the IDS received March 16, 2004 has been considered. In particular the Office Action points out that a proper IDS requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. The copy of the substitute for form 1449, filed by Applicants on March 16, 2004, that was returned with the Office Action indicates several references that were not considered. As pointed out in the IDS that accompanied the substitute for form 1449, copies of the cited references were provided either by Applicants or by the Examiner in the U.S. Application Serial No. 09/606,369 (filed June 28, 2000), and 09/473,904 (filed December 28, 1999) to which the present application claims priority under 37 C.F.R. § 1.53(b). In accordance with 37 C.F.R. § 1.98(d), copies of these references were not enclosed. Accordingly, Applicants believe that a legible copy of all references was submitted and should have been considered by the Office in connection with the present application. Nevertheless for the convenience of the

Office, a Supplemental IDS is being filed listing those references which were not initialed in the returned copy of the substitute for form 1449 along with copies of the references.

The IDS also includes references that were cited by the United States Patent and Trademark Office during prosecution of copending applications US Ser. No. 10/767,249 and US Ser. No. 09/606,369 which are priority related to the instant application.

Objection to the Specification

The disclosure is objected to apparently for not listing Figure 1F in the first line of the description of Figure 1. Applicant has corrected the description to reference Figure 1F in the first line. Reconsideration and withdrawl of the objection is respectfully requested.

Rejections Under 35 U.S.C. § 102

Claims 29-32, 35-39, 41-42 and 45-49 are rejected under 35 U.S.C. § 102(b) as allegedly anticipated by Rava et al. (US 5,545,531). In this regard, the Office Action alleges that Rava et al. describes an "array of arrays" including individual DNA or probe chips in each well of a Microplate wherein the first substrate is a microtiter plate and the second substrate is a wafer or discretely placed probes and each probe is different. The Office Action appears to point to the entire document without specific reference to any particular passage, figure etc.

Applicants respectfully traverse the rejection. Nevertheless, in order to further prosecution of the application claims 29 and 41 have been amended to require, *inter alia*, a "substrate comprising a plurality of array locations, each array location comprising a plurality of discrete sites, wherein said sites comprise different bioactive agents, and wherein said array locations are configured as projections" to fit within a plurality of assay wells. Thus, the claims require that a substrate includes several arrays that are each configured as projections that fit within wells. In contrast, Rava et al. describes three chip plates

> Several methods of making biological chip plates are contemplated. In one method, a wafer and a body are provided. The wafer includes a substrate and a surface to which is attached a plurality of arrays of probes. The body has a

> plurality of channels. The body is attached to the surface of the wafer whereby the channels each cover an array of probes and the wafer closes one end of a plurality of the channels, thereby forming test wells defining spaces for receiving samples. In a second method, a body having a plurality of wells defining spaces is provided and biological chips are provided. The chips are attached to the wells so that the probe arrays are exposed to the space. Another embodiment involves providing a wafer having a plurality of probe arrays; and applying a material resistant to the flow of a liquid sample so as to surround the probe arrays, thereby creating test wells.

See column 2, lines 46-61 of Rava et al. All three of chip plates described by Rava et al. differ from the claimed array of arrays. The first type of chip plate, in which a wafer is attached to a second body having a plurality of channels, differs from the claims because the chip plate being flat does not include array locations configured as projections to fit within wells. The second type of chip plate, in which chips are attached to wells, differs from the claims because each chip although fit within a well only has a *single* array. There is no substrate comprising a *plurality* of array locations that are each configured as projections that fit within wells. The third type of chip plate, in which a material resistant to flow of a liquid sample surrounds a probe array, differs from the claims because again the chip plate is flat such that it does not include array locations configured as projections to fit within wells. Absent a description of a substrate having several array locations configured as projections to fit within assay wells, Rava et al. does not anticipate claims 29 and 41, or dependent claims 30-32, 35-39, 42 and 45-49. Accordingly, reconsideration and withdrawl of the rejection is respectfully requested.

Claims 29-32, 35-42 and 45-50 are rejected under 35 U.S.C. § 102(b) as allegedly anticipated by Holmes et al. (US 5,549,974). The Office Action alleges that Holmes et al. describes chemical arrays with a first substrate which can be wells or a microtiter plate and a second substrate which can be beads, resins pins etc. in the wells of a microtiter plate with different chemicals on each bead, resin, pin etc.

Applicants respectfully traverse the rejection. Nevertheless, in order to further prosecution of the application claims 29 and 41 have been amended and require, *inter alia*, a "substrate comprising a plurality of array locations, each array location comprising a plurality of discrete sites, wherein said sites comprise different bioactive agents, and wherein said array

locations are configured as projections" to fit within a plurality of assay wells. Holmes et al. describes no such substrate. Although Holmes et al. describes solid supports having projections the projections are only described as having a single type of molecule attached. Specifically, Holmes et al. provides their definition of the term "solid support" in the following passage:

> "Solid support" or "support" refers to a material or group of materials having a rigid or semi-rigid surface or surfaces. In many embodiments, at least one surface of the solid support will be substantially flat, although in some embodiments it may be desirable to physically separate synthesis regions for different compounds with, for example, wells, raised regions, pins, etched trenches, or the like. According to other embodiments, the solid support(s) will take the form of beads, resins, gels, microspheres, or other geometric configurations. The solid support is alternatively referred to herein as a support.

See column 9, lines 52-62 of Holmes et al. This passage of Holmes et al. describes two types of embodiments, one in which the support is substantially flat and another in which raised regions or pins physically separate synthesis regions for different compounds. According to this description each pin or raised region would have a single type of compound attached. This is further evident from how Holmes et al. defines region

> "Predefined region" refers to a localized area on a solid support which is, was, or is intended to be used for formation of a selected molecule and is otherwise referred to herein in the alternative as a "selected" region. The predefined region may have any convenient shape, e.g., circular, rectangular, elliptical, wedge-shaped, etc. For the sake of brevity herein, "predefined regions" are sometimes referred to simply as "regions." In some embodiments, a predefined region and, therefore, the area upon which each distinct compound is synthesized is smaller than about 1 cm^2 or less than 1 mm^2. Within these regions, the molecule synthesized therein is preferably synthesized in a substantially pure form. In additional embodiments, a predefined region can be achieved by physically separating the regions (i.e., beads, resins, gels, etc.) into wells, trays, etc.

See column 9, lines 1-16 of Holmes et al.. According to this definition, Holmes et al. requires that any regions described in their patent have one type of molecule (i.e. a selected molecule). There is no description here or anywhere else in Holmes et al. of a region having many different types of molecules. Thus, Holmes et al. does not describe array locations that have a plurality of different bioactive agents and that are configured as projections in accordance with the claims. For at least these reasons, Holmes et al. does not anticipate claims 29 and 41, or dependent

claims 30-32, 35-39, 42 and 45-49. Accordingly, reconsideration and withdrawl of the rejection is respectfully requested.

Claims 29-50 are rejected under 35 U.S.C. § 102(e) as allegedly anticipated by Felder et al. (US 6,458,533). The Office Action alleges that Felder et al. describes arrays comprising a surface of test regions which can be wells of a microtiter plate which are further subdivided into smaller subregions with different biological reagents attached.

Applicants respectfully traverse the rejection. Nevertheless, in order to further prosecution of the application claims 29 and 41 have been amended to require, *inter alia*, a "substrate comprising a plurality of array locations, each array location comprising a plurality of discrete sites, wherein said sites comprise different bioactive agents, and wherein said array locations are configured as projections" to fit within a plurality of assay wells. Thus, the claims require that a substrate includes several arrays that are each configured as projections that fit within wells. In contrast, Felder et al. describes the biological reagents as being spotted on the flat bottom surface of wells of a microtiter plate (see, for example column 2, lines 38-54 and Figure 10 of Felder et al.) or as being spotted on the flat surface of plates that are mated with a separator to form wells (see column 13, lines 10-32, and Figure 5 of Felder et al.). Nowhere does Felder et al. describe the plates as having several arrays that are each configured as projections that fit within wells. Therefore, Felder et al. does not anticipate claims 29 and 41, or dependent claims 30-40 and 42-50. Accordingly, reconsideration and withdrawl of the rejection is respectfully requested.

Claims 29-32, 35-42 and 45-50 are rejected under 35 U.S.C. § 102(e) as allegedly anticipated by Wang et al. (US 5,922,617). The Office Action alleges that Wang et al. describe a solid surface with grooves that can be separated with walls that contain microbeads or arrays in the grooves. The Office further alleges that Wang et al. describes microtiter plates.

Applicants respectfully traverse the rejection. Nevertheless, in order to further prosecution of the application claims 29 and 41 have been amended to require, *inter alia*, a "substrate comprising a plurality of array locations, each array location comprising a plurality of

discrete sites, wherein said sites comprise different bioactive agents, and wherein said array locations are configured as projections" to fit within a plurality of assay wells. Thus, the claims require that a substrate includes several arrays that are each configured as projections that fit within wells. In contrast, Wang et al. describes substrates having grooves which are loaded with beads that contain a ligand (see column 6, column 8 and Figure 4 of Wang et al). The substrate and beads of Wang et al. at best form a *single* array because there is no description of individual beads including a *plurality* of discrete sites with different bioactive agents. Furthermore, even if Wang et al. were considered, *arguendo*, to describe an array of arrays, there is no description of several arrays that project from a substrate to fit within wells. Therefore, Wang et al. does not anticipate claims 29 and 41, or dependent claims 30-32, 35-39, 42 and 45-50. Accordingly, reconsideration and withdrawl of the rejection is respectfully requested.

Double patenting

Claims 29, 31, 35, 37, 38, 40, 41, 45, 47, 48 and 50 are rejected on the ground of nonstatutory obviousness-type double patenting as allegedly unpatentable over claims 1-4, 7-9, 12-18, and 24-30 of US 6,429,027.

Applicants respectfully traverse the rejection. Nevertheless, in order to further prosecution of the application claims 29 and 41 have been amended to require, *inter alia*, a "substrate comprising a plurality of array locations, each array location comprising a plurality of discrete sites, wherein said sites comprise different bioactive agents, and wherein said array locations are configured as projections" to fit within a plurality of assay wells. Therefore, the claims as amended are patentably distinct from the claims of US 6,429,027. Accordingly, reconsideration and withdrawl of the rejection is respectfully requested.

Claims 29, 35 and 40 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as allegedly unpatentable over claims 38 and 40-44 of copending application 09/189,543.

Application 09/189,543 has lapsed due to failure to respond to an outstanding Office Action. Therefore, the rejection is moot.

Claims 29 and 35 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as allegedly unpatentable over claims 1 and 3-7 of copending application 10/363,240.

Applicants will consider amending and/or canceling claims in one or both of the applications or filing a terminal disclaimer if necessary and appropriate when there is an indication of otherwise allowable subject matter.

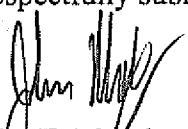
Claims 29-38, 40-48 and 50 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as allegedly unpatentable over claims 29, 30, 36-45, 49-52 and 55 of copending application 09/606,369.

Applicants will consider amending and/or canceling claims in one or both of the applications or filing a terminal disclaimer if necessary and appropriate when there is an indication of otherwise allowable subject matter.

CONCLUSION

In light of the Amendments and Remarks herein, Applicant submits that the claims are in condition for allowance and respectfully request a notice to this effect. The Examiner is invited to call the undersigned agent should there be any questions.

Respectfully submitted,



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